Printer Friendly 60/306,757 Di Application Data



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Class / Subclass:	-	Patent Number:	-		
First Named Inventor: Gerald Van Handel, Neenah, WI		Issue Date of Patent:	-		
Title of Invention:	Disposable heat insulated cups				

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## (12) United States Patent

Van Handel

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(45) Date of Patent:

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# (54) DISPOSABLE THERMALLY INSULATED CUP AND METHOD FOR MANUFACTURING THE SAME

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### Related U.S. Application Data

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		220/62.12; 220/62.18; 220/62.2; 220/62.22;
•		220 /5 84. 402 /04. 402 /07. 402 /007

### (56) References Cited

### U.S. PATENT DOCUMENTS

2,853,222 A	•	9/1958	Gallagher 229/403
3,082,900 A	٠	3/1963	Goodman 229/403
3,237,834 A	*	3/1966	Davis et al 229/400
3,402,874 A	*	9/1968	Sternall 229/125.05
3,627,166 A	٠	12/1971	Walter 220/62.2

3,737,093	Λ		6/1973	Amberg et al.
3,781,183	Α	*	12/1973	Doll 229/400
3,854,583	Α		12/1974	Amberg et al.
3,995,740	Α		12/1976	Amberg et al.
4,261,501		٠	4/1981	Watkins et al 229/404
4,435,344	Α		3/1984	lioka
4,486,366	Α		12/1984	Reddy
4,692,132	Α		9/1987	Ikushima et al.
4,982,872	Α	*	1/1991	Avery 220/62.13
5,001,016	Α		3/1991	Kondo et al.
5,092,485	Α	•	3/1992	Lee 229/403
5,205,473	Α	*	4/1993	Coffin, Sr 493/907
5,217,307	Α	*	6/1993	McClintock 229/123.2
5,490,631	Α		2/1996	lioka et al.
5,725,916	Α		3/1998	Ishii et al.
5,736,231	Α	+	4/1998	Todt 428/34.9
5,766,709	Α		6/1998	Geddes et al.
5,840,139	Α		11/1998	Geddes et al.
5,952,068	Α		9/1999	Neale et al.
5,954,217	Α		9/1999	Brkovic et al.
5,993,705	Α		11/1999	Grishchenko et al.
6,030,476	Α		2/2000	Geddes et al.
6,098,829	Α		8/2000	McHenry et al.
6,129,653	Α		10/2000	Fredericks et al.
6,139,665	Α		10/2000	Schmelzer et al.
6,142,331	A		11/2000	Breining et al.

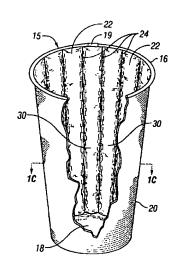
\* cited by examiner

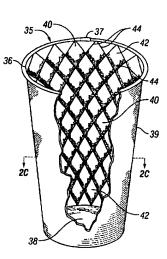
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#### (57) ABSTRACT

A disposable cup comprises a side wall having an outer surface, an inner surface, and at least one air pocket formed on the inner surface. The air pockets are formed by shrink film being adhered to the inner surface in at least one pattern and adapted to pull away from the inner surface in accordance with the pattern upon application of heat at a temperature range sufficient to cause the formation of air pockets. The formed air pockets thermally insulate a portion of the outer cup surface located directly behind the air pockets.

### 18 Claims, 8 Drawing Sheets





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